IN THE CLAIMS:

Substitute the following for claim 23:

A6

23. (amended) The composition of claim 22, wherein said Bay y 3118 is used at a concentration of at least 0.015 μg/mL.

**REMARKS**

Objections to Specification and Brief Description of the Drawings

The requested corrections have been made to the Specification and Brief Description of the Drawings.

Rejection Under 35 U.S.C. §112, second paragraph

The word "between" has been deleted from claim 23, in order to comply with the requirements of §112, second paragraph.

Rejections Under 35 U.S.C. §112, first paragraph

Applicant respectfully requests reconsideration of the rejection of claims 15-42 under 35 U.S.C. §112, first paragraph.

As the Office has acknowledged, the specification of the present application provides an example of a mutated bacteria (*M. paratuberculosis*) produced using the claimed methodology, and teaches virulence testing on the mutated *M. paratuberculosis* in Beige mice. The enablement of the present invention for *M. paratuberculosis*, along with the guidance provided in the specification with respect to other species of mycobacteria and bacteria, is sufficient under 35 U.S.C. §112, first paragraph, to enable one skilled in the art to which it pertains to make and use the invention commensurate in scope with the claims.

The specification provides guidance on what techniques to use when inserting mutations into the genome of bacteria in general, and references describing successful mutations achieved using these techniques. Such techniques include, for example, allelic exchange mutagenesis (U.S. Patent No. 6,096,549; Balasubramanian et al., *J. Bacterol.* 178:273-279, 1996; Pelicic et al., *Proc. Natl. Acad. Sci USA*, 94:10955-10960, 1997), and transposon mutagenesis (Martin et